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D. J. FOOTE

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ADJUSTABLE TRIGGER LOCKS FOR FIREARMS

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2 Sheets-Sheet 1

Fig. 1

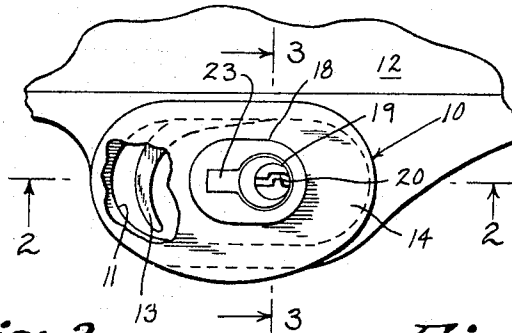


Fig. 2

Fig. 3

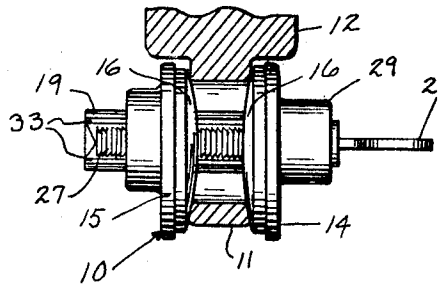
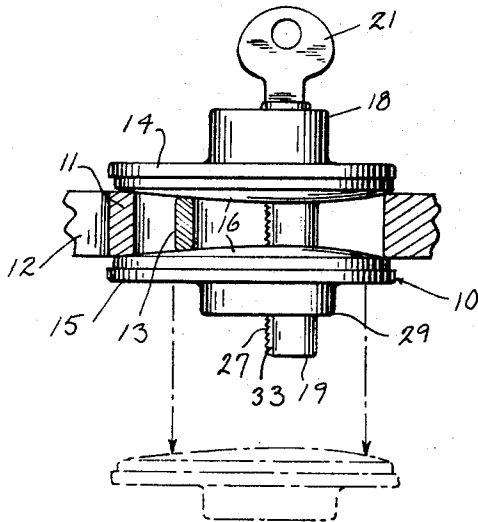
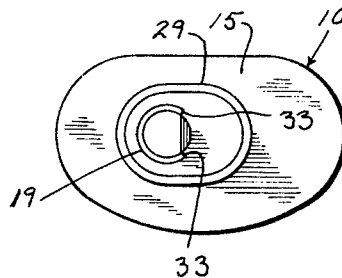


Fig. 4



INVENTOR
DANIEL J. FOOTE

BY

Morsell & Morsell

ATTORNEYS

1

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ADJUSTABLE TRIGGER LOCKS FOR FIREARMS
Daniel J. Foote, Wauwatosa, Wis., assignor to Master
Lock Company, Milwaukee, Wis., a corporation of
Wisconsin

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4 Claims. (Cl. 42—70)

ABSTRACT OF THE DISCLOSURE

To protect the triggers of guns, rifles, pistols, and various forms of firearms against accidental or unauthorized operation by a child, adult stranger, or thief, an adjustable firearm trigger lock is provided for detachable mounting on the trigger guard portion of a firearm to completely enclose the latter. The present trigger lock is adjustable to fit substantially all trigger guards of various types of firearms, and is key-operated and mounted on a firearm trigger guard so as to completely cover the trigger therein regardless of the location of the trigger and the size of the trigger guard opening.

BACKGROUND OF THE INVENTION

Field of the invention

The trigger guard of the present invention is designed to be releasably locked in enclosing relation to the trigger guard of a firearm by means of a key-operated mechanism, the entire lock enclosing the trigger and trigger guard of the gun in a manner so as to prevent accidental discharge while in no manner interfering with the storage, handling, or carrying of the firearm, whether or not it is loaded.

Description of the prior art

As far as applicant is aware there is nothing presently available which is similar in construction to his invention. The co-pending application of Foote and Buchmann for Adjustable Gun Trigger Locks, Ser. No. 552,759, filed May 25, 1966, has similar objectives, but the ends are attained through a different type of mechanism which requires, as opposed to the construction of the instant invention, guide holes within the gun trigger lock, a registering pair of which are adapted to receive a selected trigger blocking pin, the pin normally locating snugly behind the firearm trigger. The construction of the aforesaid pending application necessitates a blocking pin of a selected size, among other things. The patent to Bjorklund, No. 2,664,658, is illustrative of that class of trigger locks wherein the lock must be constructed to fit only one type of gun, which is not the case with respect to the instant trigger lock. Other forms of trigger locks which have come to applicant's attention do not have the novel structural features and ability to fit various types of firearms possessed by the trigger lock of the instant invention.

SUMMARY OF THE INVENTION

The trigger lock for firearms of the instant invention is key-operated and spring-loaded and includes a pair of laterally-separated side sections or covers, a ratchet lever, a sleeve with a series of teeth along one side thereof, together with suitable locking mechanism whereby the device may be adjusted to fit and clamp over the trigger guard areas of guns, pistols, and firearms, regardless of their size or shape. The trigger lock of the present invention is detachable and portable and is adapted for use in a home, building or room and may be mounted on a firearm which is normally kept or displayed in a gun rack. The present trigger lock, being under spring and ratchet lever pressure, securely locks the trigger against move-

2

ment and, consequently, accidental discharge of the firearm, without marring, scuffing, or scratching the finish of the trigger guard.

The improved firearm trigger lock, by reason of being applied or removed through the operation of a cylinder key, gives protection against access to the firearm trigger by children or unauthorized persons, and thereby guards the firearm against unauthorized operation.

The improved trigger lock includes a pair of side elements or front and rear covers, and mounted on their inner faces are rubber or resilient pads which, when the trigger lock is applied to the trigger guard, are squeezed and compressed through internal ratchet lever locking mechanism in the lock, whereby the trigger lock encloses the entire trigger guard or housing in a manner so that the lock cannot be moved or removed unless it is unlocked through the manipulation of a key applied by an authorized person, thereby preventing access to the firearm trigger by a child or other unauthorized tamperer.

Still further features of the present invention are that the novel trigger lock for firearms is relatively simple in design and construction, is reliable in operation, is easy to apply to and remove from the trigger guard of various forms of firearms, and is otherwise particularly well adapted for its intended purposes.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a face view of the trigger lock applied to a gun trigger guard, showing adjacent portions of the firearm, parts being broken away to show structural details;

FIG. 2 is a sectional view through the gun trigger guard taken approximately along the line 2—2 of FIG. 1 showing the trigger lock applied to the trigger guard, there being a broken line showing of the left cover of the lock as separated from the right cover and the components carried by the latter;

FIG. 3 is a vertical sectional view taken on line 3—3 of FIG. 1 only with the key applied;

FIG. 4 is an outer face view of the left cover of the trigger lock assemblage;

FIG. 5 is an inverted sectional view of the trigger lock assemblage in its connected together locked condition, the firearm trigger guard and trigger being omitted;

FIG. 6 is a transverse detail sectional view taken on line 6—6 of FIG. 5;

FIG. 7 is a transverse sectional view taken on line 7—7 of FIG. 5 showing the ratchet plug locked by means of the ratchet lever;

FIG. 8 is a similar transverse sectional view only showing the ratchet cylinder turned to its unlocked position released from the lever; and

FIG. 9 is an inner face view of one of the companion covers.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The improved trigger lock designated generally by the numeral 10 provides a detachable lock or safety device to enclose the trigger guard portion of a firearm, of any conventional type to prevent the accidental discharge of the loaded gun or to prevent unauthorized use of the gun by a child, stranger, or other unauthorized person. It is also intended that the adjustable and detachable trigger lock be of a type to fit practically all of the trigger guards forming parts of various conventional firearms. Pursuant to the present invention, the improved trigger lock, which is key-operated, will completely cover the trigger guard and trigger of the firearm to which it is applied, regardless of the location of the trigger and the size of the trigger guard opening.

As shown in FIG. 1 of the drawings, that portion of a conventional firearm which is provided with a trigger

guard 11 is indicated by the numeral 12. The gun trigger 13 is surrounded by the trigger guard 11, and when the improved lock is applied to the trigger guard 11 the trigger 13 is completely covered and rendered inaccessible for manual manipulation.

As is best shown in FIGS. 1, 2, 3, and 5, the improved trigger lock includes a key-receiving cover 14 which will be termed a "right" cover and a second or left cover 15. The two covers are separated but complementary and, as applied to a gun trigger guard, they are adapted to be laterally spaced-apart to adjustably conform to the breadth of the firearm trigger guard 11. The covers 14 and 15 are both of similar ovate shape and size and, as will hereinafter appear, when applied to a firearm trigger guard, they are adjustably held and locked together in the desired degree of transverse separation by means hereinafter to be described. The outer portion of each cover 14 and 15 is of metal, with a peripheral inturned annular flange to receive on the inner face of each cover member a resilient pad or cushion 16 which is held therein by adhesive or other suitable means. Said cushions are made of rubber, synthetic or other suitable resilient material, and the exposed surfaces of the cushions 16 are outwardly bowed or crowned. The inner portions of the pads or cushions 16 are formed with a plurality of apertures or cups 17 which enhance the resiliency of the pad 16 by permitting more deformation and the flow of the cushion material thereinto when the cushions are subjected to substantial pressure, in use.

The outer surface of the right cover 14 of the trigger lock is formed with a projecting boss 18 of generally ovate formation which houses a conventional pin cylinder shell 19 having a key slot 20 in its exposed end portion to receive a suitable operating key 21. Turning movement of the applied key 21 actuates tumbler pins 22 which yieldingly extend into the pin extension 23 which is anchored within the boss 18. The inner extended end portion of the cylinder shell 19 has an integral hollow portion formed with an elongated opening 24 coextensive with one side wall portion thereof to expose a side wall portion of a pin or plug 25 turnably housed within the extended shell 19. The marginal portions of the shell 19 adjacent the longitudinal wall opening 24 therein are formed as flats 26 to, under certain conditions, expose therebetween and through the opening 24 an extent of teeth or serrations 27 formed on a flattened surface portion of the plug 25. The arrangement is such that when the pin or plug 25 is turned through a certain arc by a turning movement imparted to the applied key 21, the ratchet teeth or serrations 27 will be presented to and be exposed through the opening 24 in the shell 19 between the shell flats 26, as is shown in FIGS. 5 and 7. However, a turning movement of the member 25, through the key 21, in another direction, will cause the teeth 27 to be moved out of the exposed position and to be covered by the surrounding portions of the hollow shell 19. It is, of course, obvious that the right cover 14, including its pad or cushion 16, is formed with an opening therethrough to accommodate the extended portion of the plug 25. Likewise, the left cover 15, including its resilient pad 16, is formed with an opening or bore 28 therethrough to longitudinally adjustably receive the outer end portion of the plug 25 when the right and left cover members are assembled for engagement with the opposite face portions of a gun trigger guard 11. The outer face of the left cover member 15 is formed with a projecting boss 29 also of generally ovate formation and having an opening therein registering with the opening 28. As will be observed from FIGS. 1 and 2, the bosses 18 and 29 on the metal portions of the cover members are off center so that the extended shell 19, which forms the connecting means for the right and left covers when the lock is applied to a trigger guard, is off center and assumes a position relative to the firearm trigger 13 corresponding to that shown in FIG. 1.

As will appear more clearly from FIG. 5 of the draw-

ings, a portion of the cylinder shell 19 within the right cover 14 carries a laterally-projecting pin 29' projectible into a radial slot 30 in the plug 25, the arrangement being such as to limit the turning movement of the plug 25 to a quarter of a revolution when the key 21 is operated.

It was heretofore brought out that the left cover plate 15, including the resilient pad 16 carried thereby, is formed with an opening 28 to receive the extended portion of the cylinder shell 19 and the plug 25 therewithin. Operatively mounted within a recess 31 therefor in the left cover boss 29 is a spring-urged ratchet dog 32 which extends between the flats 26 to selectively engage the ratchet teeth 27 on the plug 25 when the latter is turned to expose the teeth through the shell opening 24.

To mount the improved adjustable trigger lock on the trigger guard 11 of a firearm, the left cover 15, which contains the spring-loaded ratchet dog 32 and the resilient pad 16, is manually positioned against the remote face of the trigger guard with the resilient pad or cushion 16 in contact with the latter. The right cover 14 is then positioned against the front of the trigger guard so as to cover the same, and the cylinder shell 19 carried by the right cover is passed transversely through the opening in the trigger guard, forwardly of the trigger 13, with the extended end of the cylinder shell being inserted into the opening 28 therefor in the components of the left cover 15. The flattened portions 26 adjacent the opening 24 in the extended portion of the cylinder shell register with similar flattened portions 33 (see FIG. 4) thereadjacent in the boss 29 to insure proper alignment of the parts being assembled. The right and left covers 14 and 15 may be brought together as firmly as desired with the pads or cushions 16 impinging against the opposite outer surface portions of the trigger guard 11. During this mounting operation the plug 25 is in a position so that the ratchet teeth 27 are exposed to the spring-loaded ratchet dog 32 and inward adjustments are possible, but the ratchet dog, through engagement with any of the adjacent teeth 27, will prevent outward separation of the right cover 14 relative to the left cover 15. Therefore, it is possible to mount this trigger lock on any trigger guard, regardless of the breadth of the latter. As thus mounted, and with the cushions of the members 14 and 15 firmly compressed against the trigger guard and covering the same, the trigger lock becomes securely attached to the trigger guard and prevents access to the covered gun trigger 13. The lock cannot be removed without unlocking the unit through manipulation of the applied key 21. However, when the key is applied, in order to remove the lock from the trigger guard the plug 25, through movement of the key, is turned a quarter of a revolution, and this causes the ratchet teeth 27 to be removed from the ratchet dog 32 so as to be within the confines of the shell 19, as shown in FIG. 8. Then, by pulling outwardly on the right cover 14, the cylinder shell 19 will easily slide out of the opening 28 to free the right cover and its components from the left cover, whereby the lock may be completely removed from the gun trigger guard.

By providing a gun trigger lock having a key-controlled pin tumbler cylinder mechanism it is impossible for anyone to gain access to the lock, when it is applied to the trigger guard of a firearm, except the authorized possessor of the key. The lock, when mounted, conforms to the shape of the gun trigger guard and completely covers the same, and it mounts so compactly and snugly that it in no manner interferes with storage, handling, or carrying of the firearm, but renders it completely protected.

From the foregoing description it will be seen that the improved adjustable trigger lock is readily adaptable to the trigger guards of various types of firearms, is easy to apply and remove, is adjustable to conform to the breadth of the trigger guard to which it is applied, and it is otherwise well adapted for the purposes described.

What is claimed as the invention is:

1. In a trigger lock having a pair of opposed cover

5

members shaped to engage and substantially cover opposite faces of a firearm trigger guard, the improvements which comprise: a turnable plug connected to and extending transversely of the plane of one of the cover members adapted to extend transversely through the firearm trigger guard, the other cover member being formed with an opening therethrough to adjustably receive an extended portion of said turnable plug; a fixed cylindrical shell housing the turnable plug; ratchet teeth on the extended portion of the turnable plug; a ratchet dog yieldingly mounted within said other cover member adjacent its opening, the fixed cylinder shell which houses the turnable plug being slotted to expose the ratchet teeth on the plug in a certain turned position of the latter, the ratchet teeth on the extended portion of the turnable plug and the yieldingly mounted ratchet dog permitting the cover members to be adjustably clamped against opposite sides of the trigger guard in connected, spaced relation.

2. A trigger lock as claimed in claim 1 wherein the turn-

6

able plug is key controlled.

3. A trigger lock as claimed in claim 1 wherein the inner faces of the said cover members carry resilient pads.

4. A trigger lock as claimed in claim 3 wherein the cover-carried resilient pads are apertured and yieldingly deform against surface portions of the trigger guard to which the cover members are applied.

References Cited

UNITED STATES PATENTS

2,512,140	6/1950	Childs et al.	42—70
2,664,658	1/1954	Bjorklund	42—70
3,031,787	5/1962	Womble	42—1

FOREIGN PATENTS

968,669	9/1964	Great Britain.
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BENJAMIN A. BORCHELT, *Primary Examiner.*